



## Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-372



### Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS)

As of FY 2015 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

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## Common Acronyms and Abbreviations

Acq O&M - Acquisition-Related Operations and Maintenance  
APB - Acquisition Program Baseline  
APPN - Appropriation  
APUC - Average Procurement Unit Cost  
BA - Budget Authority/Budget Activity  
BY - Base Year  
DAMIR - Defense Acquisition Management Information Retrieval  
Dev Est - Development Estimate  
DoD - Department of Defense  
DSN - Defense Switched Network  
Econ - Economic  
Eng - Engineering  
Est - Estimating  
FMS - Foreign Military Sales  
FY - Fiscal Year  
IOC - Initial Operational Capability  
\$K - Thousands of Dollars  
LRIP - Low Rate Initial Production  
\$M - Millions of Dollars  
MILCON - Military Construction  
N/A - Not Applicable  
O&S - Operating and Support  
Oth - Other  
PAUC - Program Acquisition Unit Cost  
PB - President's Budget  
PE - Program Element  
Proc - Procurement  
Prod Est - Production Estimate  
QR - Quantity Related  
Qty - Quantity  
RDT&E - Research, Development, Test, and Evaluation  
SAR - Selected Acquisition Report  
Sch - Schedule  
Spt - Support  
TBD - To Be Determined  
TY - Then Year  
UCR - Unit Cost Reporting

## Program Information

**Program Name**

Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS)

**DoD Component**

Army

## Responsible Office

**Responsible Office**

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**Date Assigned** June 27, 2012

## References

**SAR Baseline (Development Estimate)**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated August 5, 2005

**Approved APB**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated August 8, 2013

## Mission and Description

Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) is a supporting program of the Army and Joint Integrated Air and Missile Defense, providing persistent, over the horizon surveillance and fire control quality data on Army and Joint networks enabling protection of the United States and coalition forces as well as geopolitical assets from Cruise Missiles, Aircraft, Unmanned Air Vehicles, Tactical Ballistic Missiles, Large Caliber Rockets, and Surface Moving Targets.

JLENS uses advanced sensor and networking technologies to provide persistent, 360-degree, wide-area surveillance and precision tracking of Land Attack Cruise Missiles and other types of Air Breathing Threats. This information is distributed via joint service networks and provides fire control quality data to Surface-to-Air missile systems such as Army Patriot and Navy Aegis, increasing the weapons' capabilities by allowing systems to engage targets normally below, outside, or beyond surface-based weapons' field of view. JLENS also provides fire control quality data to fighter aircraft allowing them to engage hostile threats from extended ranges, and contributes to the development of a single integrated air picture.

A JLENS orbit consists of two systems: a fire control radar system and a wide-area surveillance radar system. Each radar system employs a separate 74-meter tethered aerostat, mobile mooring station, radar and communications payload, processing station, and associated ground support equipment. The systems are designed to work together, but can operate independently. The JLENS orbit is transportable by road, rail, sea, and air.

JLENS does not replace an antecedent system.

## Executive Summary

The Department of Army notified Congress on March 27, 2012, that the JLENS program had incurred a Critical Nunn-McCurdy (NM) unit cost breach with the submission of the FY 2013 PB due to a 100-percent reduction in planned procurement quantities. On May 24, 2012, the Defense Acquisition Executive (DAE) signed the NM Acquisition Decision Memorandum (ADM) certifying the restructured JLENS program consisting of two Engineering and Manufacturing Development (EMD) orbits. The NM ADM allowed the Army to complete scheduled EMD test and evaluation in 2013, but directed the JLENS program to not plan for production. The NM ADM also directed the JLENS program to assist in site selection and planning for the employment of one JLENS orbit in support of an operational Continental United States-based exercise and, when a location was determined and orders were approved by the National Command Authority, to conduct such employment. The JLENS program continued to develop planned capabilities to completion, assess test results, correct short comings/deficiencies, and develop documentation to track and assess program status.

On January 31, 2013, the Joint Requirements Oversight Council concurred with the proposed JLENS employment to Aberdeen Proving Ground (APG), Maryland, for an operational exercise in FY 2014 to FY 2017.

On May 30, 2013, the JLENS Product Office and the Lower Tier Project Office (LTPO) conducted a successful JLENS-to-Fighter Integrated Fire Control (IFC) walk-up at the Utah Test and Training Range (UTTR). The walkup event successfully demonstrated the end-to-end IFC communication link between the JLENS Fire Control Radar, the Warfighter Real-Time Analysis Interoperability with Truth (WRAITH) at Fire Break Alpha, and a fighter aircraft equipped with an Instrumented Test Vehicle.

On June 14, 2013, the JLENS Early User Test 2 (EUT-2) was successfully completed at UTTR. The EUT-2 demonstrated JLENS tactical operational endurance by staying aloft and radiating 24/7 for a period of three weeks. The EUT-2 evaluated JLENS operational performance against live air and ground targets consisting of air breathing threats and land-based surface moving targets (boats, cars, and trucks) using approved threat profiles.

On July 17, 2013, the JLENS-to-Fighter IFC demonstration was successfully conducted at UTTR. JLENS passed track data via Link-16 to a U.S. Air Force fighter in support of its engagement of a cruise missile surrogate target. Data flow between JLENS and the fighter was facilitated by WRAITH, an LTPO developed test asset used for demonstrating IFC capability.

On August 8, 2013, the DAE approved the revised APB for the restructured JLENS program. On August 9, 2013, the DAE delegated Milestone Decision Authority for JLENS to the Army and designated the program as Acquisition Category IC.

On August 19-21, 2013, the JLENS orbit at UTTR participated in a North American Aerospace Defense Command National Capital Region (NCR) Integrated Air Defense Systems Proof of Concept. JLENS was successfully integrated into the representative NCR Command and Control architecture and surveillance data was passed across the network and then distributed to the designated remote weapons platforms. JLENS effectively supported eight Air-to-Air IFC engagements, two organic Ground-to-Air engagements, and one Ground-to-Air IFC engagement.

On September 10, 2013, a modification to the JLENS EMD contract was executed extending the period of performance from September 30, 2013 to December 31, 2013. This extension facilitated several final major events required to ensure JLENS would be functionally ready to support the Northern Command exercise including Identification Friend or Foe (IFF) Mode 5 certification, Cooperative Engagement Capability integration, and completion of the Functional Configuration Audit.

On October 30, 2013, the JLENS Product Office, with representatives from the Security Assistance Management Directorate and the U.S. Army Security Assistance Command (USASAC), provided a Government of Japan delegation and information brief regarding JLENS FMS capability. The Pricing and Availability Case #1 and Case #2 were completed and sent back to USASAC on February 28, 2014.

The \$20.9M in MILCON funding for JLENS site construction was authorized and appropriated in the FY 2014 budget. The Army Budget Office distributed JLENS MILCON funding to the Assistant Chief of Staff for Installation Management on February 21, 2014.

On December 3, 2013, the U.S. Army Corps of Engineers construction contract request for proposals for development of two operational sites at APG, Maryland, was published in the Federal Biz Ops.

On December 9-13, 2013, the JLENS Product Office conducted test operations at UTTR. JLENS completed Phase I of IFF Box and Platform testing. Certification will be completed in April 2014.

During first quarter FY 2014, shutdown and transfer of the JLENS site at the White Sands Missile Range (WSMR), New Mexico, was accomplished with completion on December 12, 2013. Orbit 2 Tactical Hardware and Government-Furnished Equipment were shipped from the WSMR test site to the JLENS UTTR test site for storage.

On December 18, 2013, ownership of the two JLENS orbits was transferred to the Government.

On December 31, 2013, the EMD contract period of performance was completed.

During 2013, soldiers from the Air Defense Artillery Battalion were actively engaged in a series of training activities. From January 6, 2014 to January 28, 2014, 14 soldiers graduated from the Communications and Processing Group maintenance course taught at UTTR. The soldiers were trained to perform preventive maintenance and field-level corrective maintenance to include Line Replaceable Units removal and replacement required to maintain the workstations, the Environmental Control System, and the communications payload equipment of the JLENS. From January 6, 2014 to February 20, 2014, 17 soldiers graduated from the Aerostat Mechanical course and the Aerostat Electrical course taught at the Tethered Communications facility in Elizabeth City, North Carolina. As well, from February 10, 2014 to February 27, 2014, 14 soldiers graduated from the Systems Administration course, which was also taught at UTTR. The soldiers were trained to perform critical tasks required for operation and maintenance of JLENS during the three-year operational exercise at APG, Maryland.

There are no significant software-related issues with this program at this time.

This is the final SAR submission for JLENS, because the program is 90% or more delivered.



## Threshold Breaches

### APB Breaches

<b>Schedule</b>		<input type="checkbox"/>
<b>Performance</b>		<input type="checkbox"/>
<b>Cost</b>	RDT&E	<input type="checkbox"/>
	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
<b>O&amp;S Cost</b>		<input type="checkbox"/>
<b>Unit Cost</b>	PAUC	<input type="checkbox"/>
	APUC	<input type="checkbox"/>

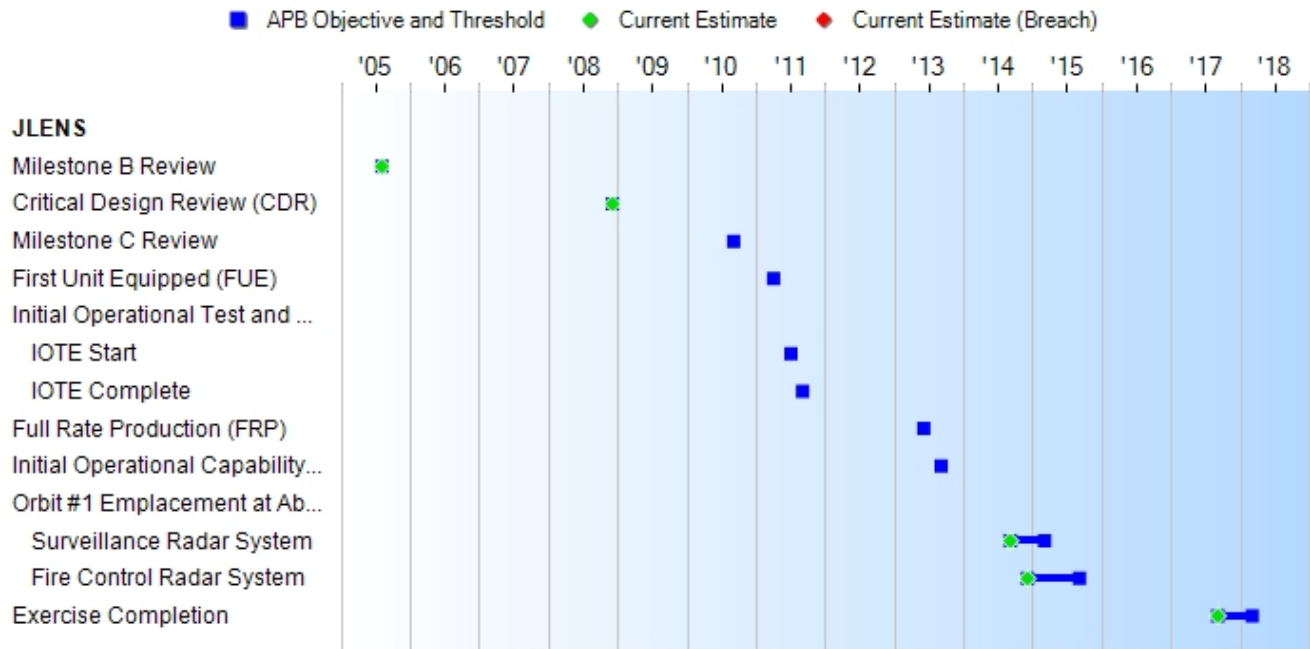
### Explanation of Breach

After certification of the restructured JLENS program following completion of the Nunn-McCurdy process, in August 2013 the Defense Acquisition Executive reset the APB and delegated Milestone Decision Authority for JLENS to the Army.

### Nunn-McCurdy Breaches

<b>Current UCR Baseline</b>		
	PAUC	None
	APUC	None
<b>Original UCR Baseline</b>		
	PAUC	None
	APUC	None

## Schedule



Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate
Milestone B Review	AUG 2005	AUG 2005	AUG 2005	AUG 2005
Critical Design Review (CDR)	SEP 2008	DEC 2008	DEC 2008	DEC 2008
Milestone C Review	SEP 2010	N/A	N/A	N/A
First Unit Equipped (FUE)	APR 2011	N/A	N/A	N/A
Initial Operational Test and Evaluation (IOTE)				
IOTE Start	JUL 2011	N/A	N/A	N/A
IOTE Complete	SEP 2011	N/A	N/A	N/A
Full Rate Production (FRP)	JUN 2013	N/A	N/A	N/A
Initial Operational Capability (IOC)	SEP 2013	N/A	N/A	N/A
Orbit #1 Emplacement at Aberdeen Proving Grounds, Maryland				(Ch-1)
Surveillance Radar System	N/A	SEP 2014	MAR 2015	SEP 2014 (Ch-1)
Fire Control Radar System	N/A	DEC 2014	SEP 2015	DEC 2014 (Ch-1)
Exercise Completion	N/A	SEP 2017	MAR 2018	SEP 2017 (Ch-1)

**Change Explanations**

(Ch-1) Milestones were added for Orbit #1 Emplacement at Aberdeen Proving Grounds and Exercise Completion to allow JLENS to complete the restructured program and execute a JLENS operational exercise in accordance with the NM certification ADM.

**Acronyms and Abbreviations**

ADM - Acquisition Decision Memorandum

NM - Nunn-McCurdy

## Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
KPP 1 Single Integrated Air Picture (SIAP)					
Surveillance coverage (deg)	360	360	360	360	360
KPP 2 Integrated Fire Control (IFC)	Forward Pass (FP)	Forward Pass (FP)	Engage-on- Remote (EOR)	EOR	EOR
KPP 3 Combat Identification (CID)					
Identification Friend or Foe (IFF)	All DoD Validated IFF and Warsaw Pact/ Coalition modes	All DoD Validated IFF and Warsaw Pact/ Coalition modes	All DoD validated IFF modes	Modes 1, 2, 3, and 4	All DoD Validated IFF and Warsaw Pact/Co- alition modes
Precise Participant Location and Identification (PPLI) Correlation	Correlated PPLI messages w/JLENS organic tracks	Correlated PPLI messages w/JLENS organic tracks	Correlated PPLI messages w/JLENS organic tracks	Correlated PPLI messages with JLENS organic tracks	Correlated PPLI messages w/ JLENS organic tracks
KPP 4 C4I Interoperability					
Information Exchange Requirements (IERs)	100% of all top level IERs	100% of all top level IERs	100% of all top level critical IERs	100% of all top level IERs	100% of all top level IERs
Theater Air and Missile Defense Integrated Architecture	Available behavior models	Available behavior models	Data complete- ness, data availability, and common processing	Data complete- ness, data availability, and common processing	Available behavior models
Net Ready (NR) KPP	Develop Migration Plan to show how we plan to meet NR- KPP	Develop Migration Plan to show how we plan to meet NR- KPP	Develop Migration Plan to show how we plan to meet NR- KPP	Link-16, CEC, JRE, IBS-receive only, ABCS via AMDWS	Develop Migration Plan to show how we plan to meet NR- KPP

Classified Performance information is provided in the classified annex to this submission.

**Requirements Source**

Operational Requirements Document (ORD) dated February 24, 2004

**Change Explanations**

None

**Memo**

JLENS KPPs were demonstrated during Developmental Testing 1 (November 7, 2011 to December 16, 2011), Developmental Testing 2 (August 23, 2012 to September 27, 2012), the Early User Test (EUT) (October 29, 2012 to December 7, 2012), the JLENS-to-Fighter IFC live fire (July 17, 2013), the EUT-2 (April 3, 2013 to June 14, 2013), and the Weapons System Evaluation Program (August 19-21, 2013).

There have been no changes in the demonstrated performance since the December 2012 SAR.

**Acronyms and Abbreviations**

ABCS - Air Battle Command System

AMDWS - Air and Missile Defense Workstation

C4I - Command, Control, Communications, Computers, and Intelligence

CEC - Cooperative Engagement Capability

deg - degrees

IBS - Information Broadcast System

JRE - Joint Range Extension

KPP - Key Performance Parameter

w/ - with

**Track to Budget****RDT&E**

Appn		BA	PE
Army	2040	07	0102419A
Project		Name	
E55		Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS)	

**MILCON**

Appn		BA	PE
Army	2050	01	0805796A
Project		Name	
071948		Vehicle Maintenance Shop	(Sunk)
081875		Operations and Maintenance	(Sunk)

## Cost and Funding

### Cost Summary

#### Total Acquisition Cost and Quantity

Appropriation	BY2005 \$M			BY2005 \$M	TY \$M		
	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	1760.0	2251.5	2476.7	2249.9	1948.0	2561.5	2553.8
Procurement	4027.0	0.0	--	0.0	5126.0	0.0	0.0
Flyaway	--	--	--	0.0	--	--	0.0
Recurring	--	--	--	0.0	--	--	0.0
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	0.0	--	--	0.0
Other Support	--	--	--	0.0	--	--	0.0
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	63.0	33.8	37.2	34.0	77.0	40.9	40.9
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	5850.0	2285.3	N/A	2283.9	7151.0	2602.4	2594.7

Confidence Level for Current APB Cost 80% -

The JLENS Product Office entered a confidence level of 80 percent for the following reasons. Milestone B approval for JLENS was granted in August 2005. When the program was curtailed in the FY 2013 President's Budget, considerable development effort had been completed resulting in the majority of the Total Acquisition Costs being sunk. In addition, the path forward for the remainder of the program is fairly well defined.

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	2	2	2
Procurement	14	0	0
Total	16	2	2

The two RDT&E funded Engineering and Manufacturing Development (EMD) orbits are considered fully configured and production representative. Based on asset utilization required to complete EMD and support the Secretary of Defense directed Combatant Command Exercise, Organizational Support Equipment was acquired for EMD Orbit #1. The EMD Orbit #2 was used to support EMD and will be stored in accordance with the guidance received at the conclusion of the Nunn-McCurdy process.

The unit of measure is a JLENS orbit, which consists of two systems: a fire control radar system and a wide-area surveillance radar system. Each radar system employs a separate 74-meter tethered aerostat, mobile mooring station, radar and communications payload, processing station, and associated ground support equipment. The systems are designed to work together, but can operate independently.



## Cost and Funding

### Funding Summary

#### Appropriation and Quantity Summary FY2015 President's Budget / December 2013 SAR (TY\$ M)

Appropriation	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
RDT&E	2323.8	83.5	54.1	50.2	39.6	2.6	0.0	0.0	2553.8
Procurement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MILCON	20.0	20.9	0.0	0.0	0.0	0.0	0.0	0.0	40.9
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2015 Total	2343.8	104.4	54.1	50.2	39.6	2.6	0.0	0.0	2594.7
PB 2014 Total	2391.9	119.4	46.6	47.5	37.8	2.6	0.0	0.0	2645.8
Delta	-48.1	-15.0	7.5	2.7	1.8	0.0	0.0	0.0	-51.1

Additional funding was added in FY 2015 - FY 2017 for the integration of the JLENS orbit into the National Capital Region to support the Combatant Command (COCOM) Exercise.

The Senate Appropriations Committee report for the FY 2014 National Defense Authorization Act directed that the JLENS RDT&E parent funding line be divided between two separate funding lines, Engineering and Manufacturing Development (EMD) and COCOM Exercise, which are summed under the parent funding line. The EMD line will be funded at \$60.0M and the COCOM Exercise line will be funded at \$23.5M for a total of \$83.5M in FY 2014.

Quantity	Undistributed	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
Development	2	0	0	0	0	0	0	0	0	2
Production	0	0	0	0	0	0	0	0	0	0
PB 2015 Total	2	0	0	0	0	0	0	0	0	2
PB 2014 Total	2	0	0	0	0	0	0	0	0	2
Delta	0	0	0	0	0	0	0	0	0	0

## Cost and Funding

### Annual Funding By Appropriation

#### Annual Funding TY\$

2040 | RDT&E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
2006	--	--	--	--	--	--	99.8
2007	--	--	--	--	--	--	237.8
2008	--	--	--	--	--	--	464.9
2009	--	--	--	--	--	--	344.8
2010	--	--	--	--	--	--	317.1
2011	--	--	--	--	--	--	399.5
2012	--	--	--	--	--	--	317.4
2013	--	--	--	--	--	--	142.5
2014	--	--	--	--	--	--	83.5
2015	--	--	--	--	--	--	54.1
2016	--	--	--	--	--	--	50.2
2017	--	--	--	--	--	--	39.6
2018	--	--	--	--	--	--	2.6
<b>Subtotal</b>	<b>2</b>	--	--	--	--	--	<b>2553.8</b>

## Annual Funding BY\$

## 2040 | RDT&amp;E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 \$M	Non End Item Recurring Flyaway BY 2005 \$M	Non Recurring Flyaway BY 2005 \$M	Total Flyaway BY 2005 \$M	Total Support BY 2005 \$M	Total Program BY 2005 \$M
2006	--	--	--	--	--	--	94.8
2007	--	--	--	--	--	--	220.6
2008	--	--	--	--	--	--	423.2
2009	--	--	--	--	--	--	309.9
2010	--	--	--	--	--	--	280.7
2011	--	--	--	--	--	--	346.8
2012	--	--	--	--	--	--	271.1
2013	--	--	--	--	--	--	119.5
2014	--	--	--	--	--	--	68.2
2015	--	--	--	--	--	--	43.3
2016	--	--	--	--	--	--	39.4
2017	--	--	--	--	--	--	30.4
2018	--	--	--	--	--	--	2.0
<b>Subtotal</b>	<b>2</b>	--	--	--	--	--	<b>2249.9</b>

**Annual Funding TY\$**  
**2050 | MILCON | Military Construction,**  
**Army**

<b>Fiscal Year</b>	<b>Total Program TY \$M</b>
2010	20.0
2011	--
2012	--
2013	--
2014	20.9
<b>Subtotal</b>	<b>40.9</b>

**Annual Funding BY\$**  
**2050 | MILCON | Military Construction,**  
**Army**

<b>Fiscal Year</b>	<b>Total Program BY 2005 \$M</b>
2010	17.3
2011	--
2012	--
2013	--
2014	16.7
<b>Subtotal</b>	<b>34.0</b>

Funding shown in FY 2010 excludes cost budgeted for non-system specific facilities (barracks, roads, utilities, and infrastructure) in JLENS Military Construction Program Elements.

Funding shown in FY 2014 includes cost budgeted for the following tasks: construction of aerostat pads, roads, operation and support facilities, communications infrastructure, and electrical power transmission and distribution infrastructure to support missile defense equipment at Aberdeen Proving Grounds, Maryland.

## Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	8/5/2005	
Approved Quantity	2	
Reference	Milestone B ADM	See notes below
Start Year	2011	
End Year	2012	

The FY 2013 PB suspended all JLENS procurement, including the two LRIP orbits.

The May 24, 2012 Nunn-McCurdy Acquisition Decision Memorandum directs Army not to plan for entry of the JLENS program into the production phase.

## Foreign Military Sales

None

## Nuclear Costs

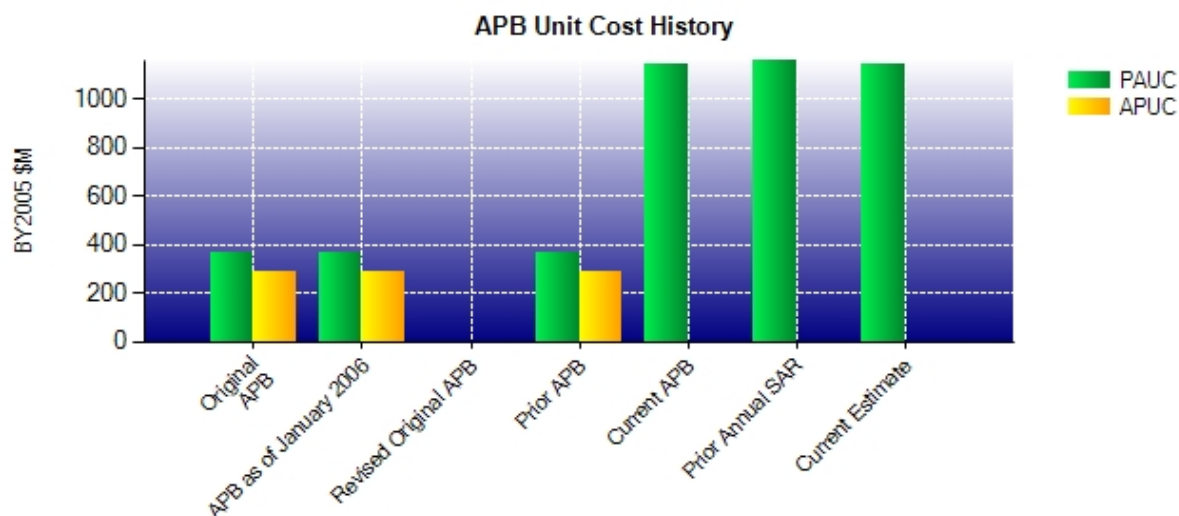
None

**Unit Cost****Unit Cost Report**

	BY2005 \$M	BY2005 \$M	
Unit Cost	Current UCR Baseline (AUG 2013 APB)	Current Estimate (DEC 2013 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	2285.3	2283.9	
Quantity	2	2	
Unit Cost	1142.650	1141.950	-0.06
Average Procurement Unit Cost (APUC)			
Cost	0.0	0.0	
Quantity	0	0	
Unit Cost	--	--	--



## Unit Cost History



	Date	BY2005 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	AUG 2005	365.625	287.643	446.938	366.143
APB as of January 2006	AUG 2005	365.625	287.643	446.938	366.143
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	AUG 2005	365.625	287.643	446.938	366.143
Current APB	AUG 2013	1142.650	N/A	1301.200	N/A
Prior Annual SAR	DEC 2012	1160.700	N/A	1322.900	N/A
Current Estimate	DEC 2013	1141.950	N/A	1297.350	N/A

## SAR Unit Cost History

### Current SAR Baseline to Current Estimate (TY \$M)

Initial PAUC Dev Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
446.938	-3.600	1239.112	31.600	-1.050	-41.150	0.000	-374.500	850.412	1297.350

## Current SAR Baseline to Current Estimate (TY \$M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
366.143	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

## SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	AUG 2005	N/A	AUG 2005
Milestone C	N/A	SEP 2010	N/A	N/A
IOC	N/A	SEP 2013	N/A	N/A
Total Cost (TY \$M)	N/A	7151.0	N/A	2594.7
Total Quantity	N/A	16	N/A	2
Prog. Acq. Unit Cost (PAUC)	N/A	446.938	N/A	1297.350

**Cost Variance**

Summary Then Year \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1948.0	5126.0	77.0	7151.0
Previous Changes				
Economic	+28.4	-30.3	+1.6	-0.3
Quantity	--	-3778.9	--	-3778.9
Schedule	+325.0	-261.8	--	+63.2
Engineering	-2.1	--	--	-2.1
Estimating	+305.6	-306.0	-37.7	-38.1
Other	--	--	--	--
Support	--	-749.0	--	-749.0
Subtotal	+656.9	-5126.0	-36.1	-4505.2
Current Changes				
Economic	-6.6	--	-0.3	-6.9
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-44.5	--	+0.3	-44.2
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-51.1	--	--	-51.1
Total Changes	+605.8	-5126.0	-36.1	-4556.3
CE - Cost Variance	2553.8	--	40.9	2594.7
CE - Cost & Funding	2553.8	--	40.9	2594.7

Summary Base Year 2005 \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1760.0	4027.0	63.0	5850.0
Previous Changes				
Economic	--	--	--	--
Quantity	--	-2881.6	--	-2881.6
Schedule	+278.2	-329.9	--	-51.7
Engineering	--	--	--	--
Estimating	+249.4	-223.5	-29.2	-3.3
Other	--	--	--	--
Support	--	-592.0	--	-592.0
Subtotal	+527.6	-4027.0	-29.2	-3528.6
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-37.7	--	+0.2	-37.5
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-37.7	--	+0.2	-37.5
Total Changes	+489.9	-4027.0	-29.0	-3566.1
CE - Cost Variance	2249.9	--	34.0	2283.9
CE - Cost & Funding	2249.9	--	34.0	2283.9

Previous Estimate: December 2012

<b>RDT&amp;E</b>		<b>\$M</b>	
<b>Current Change Explanations</b>		<b>Base Year</b>	<b>Then Year</b>
Revised escalation indices. (Economic)		N/A	-6.6
Adjustment for current and prior escalation. (Estimating)		+4.7	+5.5
Budgetary reduction for Small Business Innovative Research and Small Business Technology Transfer in FY 2013. (Estimating)		-3.8	-4.5
Revised estimate due to Congressional reductions in FY 2013 and FY 2014. (Estimating)		-37.8	-45.5
Revised estimate to integrate the JLENS orbit into the National Capital Region to support the Combatant Command Exercise. (Estimating)		+10.2	+13.0
Refined estimate. (Estimating)		-0.3	-0.3
Revised estimate due to sequestration reduction in FY 2013. (Estimating)		-10.7	-12.7
RDT&E Subtotal		-37.7	-51.1

<b>MILCON</b>		<b>\$M</b>	
<b>Current Change Explanations</b>		<b>Base Year</b>	<b>Then Year</b>
Revised escalation indices. (Economic)		N/A	-0.3
Adjustment for current and prior escalation. (Estimating)		+0.2	+0.3
MILCON Subtotal		+0.2	0.0

## Contracts

### Appropriation: RDT&E

Contract Name	<b>JLENS EMD</b>
Contractor	Raytheon Company
Contractor Location	350 Lowell St Andover, MA 01810
Contract Number, Type	DASG60-98-C-0001, CPIF
Award Date	October 25, 2005
Definitization Date	September 30, 2013

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price at Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1428.8	N/A	2	1679.0	N/A	2	1804.0	1802.0

### Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to 46 contract modifications to incorporate changes to the Engineering and Manufacturing Development (EMD) contract from August 2007 to March 2012. The largest single component is the FY 2009 EMD contract restructure (\$134.7M) to synchronize the JLENS and Army Integrated Air and Missile Defense programs. Other components of the contract price increase include: acquisition of IBM Signal Data Processors (SDP), performance specification changes, customer funds for analytical studies, Cooperative Engagement Capability SDP modifications, addition of Air and Missile Defense Workstation Hardware, Broadband Power Amplifiers, Environmental Control Units, integration of Defense Threat Reduction Agency Phase II, and an update of the Integrated Support Plan in support of the deployment Transition Plan.

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/31/2013)	-147.7	-4.8
Previous Cumulative Variances	-124.1	-1.8
Net Change	-23.6	-3.0

### Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to the contractor, Raytheon, using factored budgets and applying proportional budgets based on the remaining amount of dollars available on contract.

The unfavorable net change in the schedule variance is due to the extension of the contract period of performance from September 30, 2013 to December 31, 2013 and the inability of the contractor to deliver spares within the period of performance.

### Contract Comments

This contract is more than 90% complete; therefore, this is the final report for this contract.

**Deliveries and Expenditures**

<b>Delivered to Date</b>	<b>Plan to Date</b>	<b>Actual to Date</b>	<b>Total Quantity</b>	<b>Percent Delivered</b>
Development	2	2	2	100.00%
Production	0	0	0	--
Total Program Quantity Delivered	2	2	2	100.00%

<b>Expended and Appropriated (TY \$M)</b>			
Total Acquisition Cost	2594.7	Years Appropriated	9
Expended to Date	2299.4	Percent Years Appropriated	69.23%
Percent Expended	88.62%	Appropriated to Date	2448.2
Total Funding Years	13	Percent Appropriated	94.35%

The above data is current as of 2/25/2014.

## Operating and Support Cost

### JLENS

#### Assumptions and Ground Rules

Cost Estimate Reference:

N/A

Sustainment Strategy:

N/A

Antecedent Information:

N/A

Unitized O&S Costs BY2005 \$M			
Cost Element	JLENS Average Annual Cost Per Orbit	No Antecedent System (Antecedent) N/A	
Unit-Level Manpower	0.000		0.000
Unit Operations	0.000		0.000
Maintenance	0.000		0.000
Sustaining Support	0.000		0.000
Continuing System Improvements	0.000		0.000
Indirect Support	0.000		0.000
Other	0.000		0.000
Total	--		--

Unitized Cost Comments:

N/A

	Total O&S Cost \$M			
	Current Development APB Objective/Threshold		Current Estimate	
	JLENS		JLENS	No Antecedent System (Antecedent)
Base Year	0.0	0.0	N/A	N/A
Then Year	0.0	N/A	N/A	N/A

Total O&S Costs Comments:

The May 24, 2012 Nunn-McCurdy Acquisition Decision Memorandum (ADM) rescinded the Milestone B approval granted on August 5, 2005. The ADM also directed the Army not to plan for entry of the JLENS program into the production phase; therefore, no O&S will be required.

#### Disposal Costs:



N/A